

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) A method of controlling a loop-back process between a local device and a remote device in an Ethernet passive optical network, the method comprising the steps of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation, administration, and maintenance - packet data unit), the predetermined field having distinguishing messages for an initiation of the loop-back process and a termination of the loop-back process; and

(b) the local device and the remote device performing ~~a~~ the loop-back process, which includes an initiation of the loop-back process and a termination of the loop-back process, using the loop-back control OAM PDU.

wherein the loopback process performed by using the loop-back control OAM PDU into which the predetermined fields are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back control OAM PDU requesting the initiation of the loop-back process to the remote device; and

a loopback process termination step of transmitting, by the local device, a loop-back control OAM PDU requesting the termination of the loopback process to the remote device.

2. (Original) The method loop-back as claimed in claim 1, wherein the predetermined field comprises:

a first field value representing a message requesting an initiation of a loop-back

process;

a second field value representing a message acknowledging the initiation request message of the loop-back process;

a third field value representing a message requesting a termination of the loop-back process from the local device to the remote device;

a fourth field value representing a message a message requesting a termination of the loop-back process from the remote device to the local device; and

a fifth field value representing a message acknowledging the fourth field value from the local device to the remote device.

3. (Currently amended) The method loop-back as claimed in claim 1, wherein step ~~(b) comprises a loop-back process initiation step and a loop-back process termination step;~~

wherein the loop-back process initiation step further ~~includes the steps of:~~

~~(1) transmitting, by the local device, a loop-back control OAM PDU requesting an initiation of the loop-back process to the remote device; and~~

~~(2) transmitting, by the remote device, a the loop-back control OAM PDU acknowledging the initiation of the loop-back process to the local device; and,~~

~~wherein the loop-back process termination step includes the step of transmitting, by the local device, a loop-back control OAM PDU requesting a termination of the loop-back process to the remote device, so that the loop-back process can be terminated.~~

4. (Currently amended) The method loop-back as claimed in claim 1, ~~wherein step (b) comprises a loop-back process initiation step and a loop-back process termination step;~~
~~wherein the loop-back process initiation step includes the steps of:~~
~~(1) transmitting, by the local device, a loop-back control OAM PDU requesting an initiation of the loop-back process to the remote device; and~~
~~(2) transmitting, by the remote device, a loop-back control OAM PDU acknowledging the initiation of the loop-back process to the local device; and~~
~~wherein the loop-back process termination step further includes the steps of:~~
~~(3) transmitting, by the remote device, a loop-back control OAM PDU requesting a termination of the loop-back process to the local device; and~~
~~(4) transmitting, by the local device, a the loop-back control OAM PDU acknowledging the termination of the loop-back process to the remote device.~~

5. (Currently amended) The method loop-back as claimed in claim 1, ~~wherein step (b) comprises a loop-back process initiation step and a loop-back process termination step;~~
~~wherein the loop-back process initiation step includes the steps of:~~
~~(1) transmitting, by the local device, a loop-back control OAM PDU requesting an initiation of the loop-back process to the remote device; and~~
~~(2) transmitting, by the remote device, a loop-back control OAM PDU acknowledging the initiation of the loop-back process to the local device; and~~

wherein the loop-back process termination step includes the steps of:

(3) sensing, by the remote device, a termination of a predetermined time of the loop-back process;

(4) transmitting, by the remote device, a loop-back control OAM PDU requesting ~~a~~the termination of the loop-back process to the local device; and

(5) transmitting, by the local device, a loop-back control OAM PDU acknowledging the termination of the loop-back process to the remote device.